

# Notice of Allowability

## Application No.

09/936,190

## Examiner

Russell Kallis

## Applicant(s)

DIXON ET AL.

## Art Unit

1638

### -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 3/17/2005.
2. ☒ The allowed claim(s) is/are 1-19,50,51,54 and 67-69 (renumbered 1-25).
3. ☒ The drawings filed on 10 September 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                 |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>4/13/05</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance                                   |
|   | 9. <input type="checkbox"/> Other _____.  |

Art Unit: 1638

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Hanson on 4/13/2005.

The application has been amended as follows:

In the claims:

Claims 20-49, 52-53, 55-66 have been canceled.

In Claim 1, line 1, "species" has been deleted.

In Claim 1, line 5, "at least about" has been replaced with --more than--.

In Claim 3, line 1, "further" has been deleted; and in line 2 "to comprise" has been replaced by --with--.

In Claim 5, line 1, "gene is selected" has been replaced by --genes encode enzymes selected--.

In Claim 6, line 1, "comprises", has been replaced with --further comprises a--.

In Claim 6, line 2, after "down-stream gene", --encoding-- has been inserted.

Claim 7 (currently amended) The method of claim 1, wherein the plant is a naturally isoflavonoid-producing plant, [wherein said transgenic plant expresses said DNA segment under the control of a suitable constitutive or inducible promoter when said transgenic plant is exposed

Art Unit: 1638

to conditions which permit expression] and wherein the plant exhibits increased levels of isoflavonoid compounds from the expression.

In Claim 11, line 2, before “CYP93C”, --soybean-- has been inserted.

Claim 12 (currently amended) The method of Claim 11, wherein said DNA sequence comprises the sequence from nucleotide 36 to nucleotide 1598 of [the sequence depicted in] SEQ ID NO: 1.

Claim 14 (currently amended) The method of Claim [11]13, wherein said DNA sequence comprises the sequence from nucleotide 92 to nucleotide 1657 of [the sequence depicted in] SEQ ID NO: 4.

Claim 17 (currently amended) The method of Claim 1, [wherein said transgenic plant possesses an isoflavonoid which is isolated from said plant and used] further comprising isolating an isoflavonoid from the transgenic plant and using it to prepare a food.

Claim 18 (currently amended) The method of Claim 1, [wherein said transgenic plant possesses an isoflavonoid which is isolated from said plant and used] further comprising isolating an isoflavonoid from the transgenic plant and using it to prepare a food stuff, a nutritional supplement, an animal feed supplement, a nutraceutical, or a pharmaceutical.

In Claim 19, line 2, “possesses” has been replaced with --produces--.

In Claim 50, line 4, “at least about” has been replaced with --more than--.

Claim 54 (currently amended) A method of preparing a nutraceutical composition for achieving a nutritional effect using a transgenic plant transformed with an isolated gene or DNA segment which encodes a cytochrome P450 that can catalyze the aryl migration of a flavanone to yield an isoflavanone intermediate or an isoflavone, wherein the cytochrome P450 comprises [at

Art Unit: 1638

least about] more than 97% amino acid identity to the polypeptide encoded by nucleotide 36 to nucleotide 1598 of SEQ ID NO: 1 or nucleotide 92 to nucleotide 1657 of SEQ ID NO: 4, wherein said transgenic plant exhibits increased levels of an isoflavonoid when compared to the level of said isoflavonoid in plants of the same species which do not comprise said isolated gene or DNA segment said method comprising transforming a plant with said DNA segment and preparing a nutraceutical composition from said transformed plant.

In Claim 67, line 4, "at least about" has been replaced with --more than--.

In Claim 68, line 4, "at least about" has been replaced with --more than--.

In Claim 69, line 4, "at least about" has been replaced with --more than--.

Art Unit: 1638

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kallis whose telephone number is (571) 272-0798. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (571) 272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russell Kallis Ph.D  
April 13, 2005

A handwritten signature in black ink, appearing to read "Amy Nelson", with a stylized flourish at the end.

AMY J. NELSON, PH.D  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600